# RECONNECTING THE RED

BY RON WILSON

The Red River is born at the union of the Bois de Sioux and Otter Tail rivers in southeastern North Dakota. Its journey is northward, following a winding 549-mile path to Manitoba's Lake Winnipeg that could be cut nearly in half if the river were to run ruler-straight.

For nearly a century, the Red's passage was interrupted by a series of lowhead dams built to meet municipal water needs during times of low water. Fargo built the first dam 95 years ago.

Today, the segmentation of the Red River isn't what it once was, thanks to a multiagency and citizen effort to modify the dams by creating artificial rapids directly below them. Five of eight dams along the Red's reach in the United States have been modified to applause by biologists, conservationists and recreationists.

Reconnecting the Red, as the task of modifying the river's lowhead dams has been called, is "best for the people and great for fish," said Lynn Schlueter, North Dakota

*Because of dangerous currents, Midtown Dam in Fargo was once a place parents kept their kids away from. Nowadays, it's a popular, and much safer place for fishing.*

CRAIG BIHRLE

Game and Fish Department special projects biologist, Devils Lake.

Lowhead dams, Schlueter said, appear unthreatening, but have claimed many lives. Plus, the dams act as barriers to fish migrating upstream in search of spawning habitat. "An early spring spawning fish sometimes doesn't have any trouble moving upstream when the dams are drowned out by high water," he said. "But your late spring and early summer spawners, like catfish, can't get over the dams because the water may have dropped."

Lowhead dams are dangerous because of the hydraulic influence created when water flows over them. As water drops over the dam into a plunge pool below, an undertow is produced, rolling water toward the face of the dam, often pulling objects from downstream into the turbulence. These effects multiply as the volume of water increases, also extending the hydraulic farther downstream. "People don't understand the danger of hydraulic rollers," Schlueter said. "I've seen car tires on rims get pushed downstream, then get sucked right back up to go through the hydraulic again. A human has no chance in a situation like this."

The fix is a gently sloping bed of rocks that, when strategically placed according to engineers' designs, resembles rapids in a Western river. Instead of a sudden drop over the dam, water flows over the rock incline, eliminating undertow, while providing passage for fish. And in the Red River basin, including its tributaries, that's a lot of fish as scientists have estimated that as many as 90 fish species migrate to some extent in this system.

## Reconnecting the Disconnected

The first dam to be modified on the Red was Midtown Dam in Fargo in 1998. Since, two more in Fargo, one in Wahpeton and one in Grand Forks have followed. The three barriers yet to be addressed are Christine and Hickson dams south of Fargo, and Drayton Dam, the last major obstacle downstream of Grand Forks.

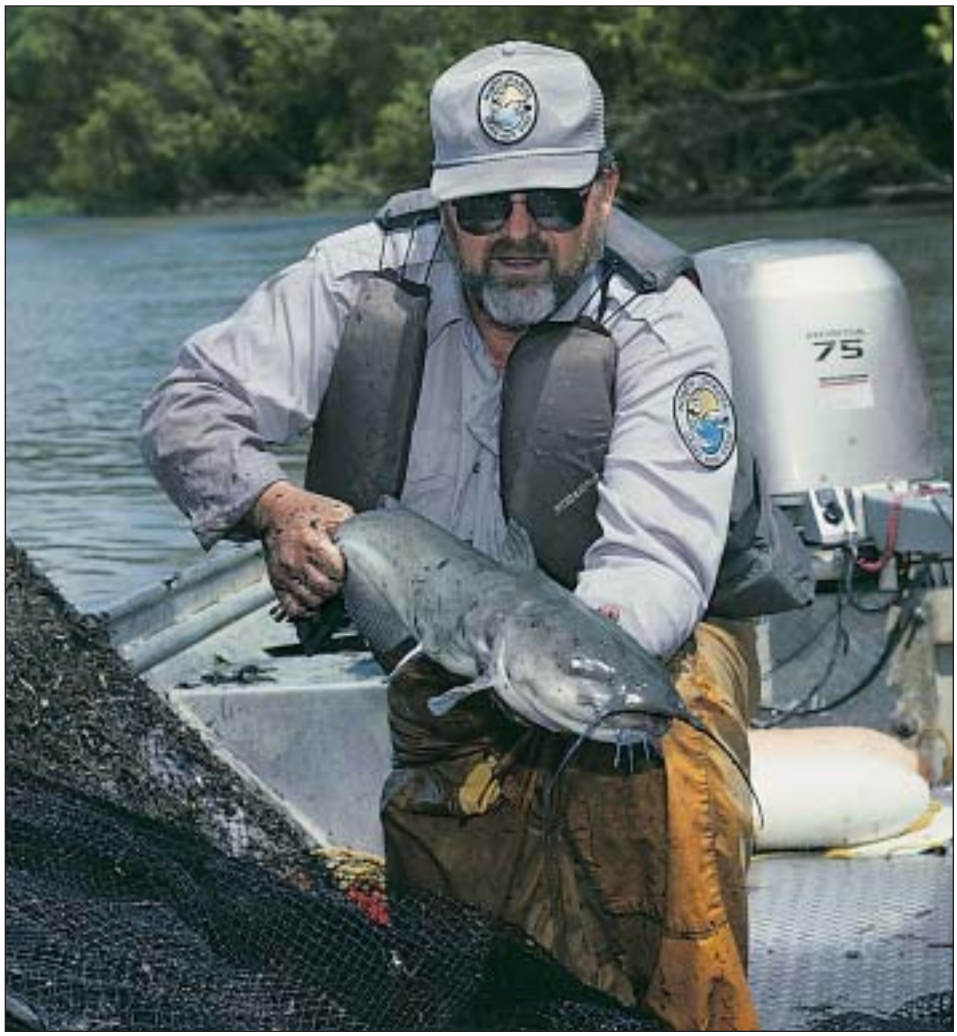
River Keepers, a nonprofit organization whose mission is to advocate sustainable use of the Red, started the effort in 1989-90 to modify Fargo's Midtown Dam. "Initially, we didn't know what kind of fix that would be," said Bob Backman, executive director of River Keepers in Fargo. "The (U.S. Army) Corps of Engineers suggested a rock slope, something that would allow for fish passage, which is important to the ecological health of the river, and be safer for humans."

Lowhead dams are dangerous and have claimed far too many lives – anywhere from 12-18 lives at Midtown alone – along the Red River over the years. "Various governmental agencies warned people to stay away from the river because it was dangerous," Backman said. "The reality is that the lowhead dams are dangerous, but not the river. People were being kept away from the Red, turning their backs on the river and not using it."

Instead of today's reconnect, there was a disconnect.

The facelifts to the Red River dams have had a domino effect, Backman said, as recreational use in and along the river have increased considerably. More and more people are fishing from shore or from boats, canoeists and kayakers ply its dark waters, and birders, bikers and hikers walk on revamped and newly-constructed paths that line the river. "You can get off work in Fargo at 5 p.m., dump your kayak into the Red and

*Lynn Schlueter, Game and Fish Department special projects biologist, Devils Lake, holds a channel catfish, one of many fish species to benefit from the dam modifications.*

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*The blue symbols designate those lowhead dams along the Red River that have been modified. Those in red have yet to be modified.*

BRIAN HOUSEK

get two to three hours in on the water before it gets dark," Backman said.

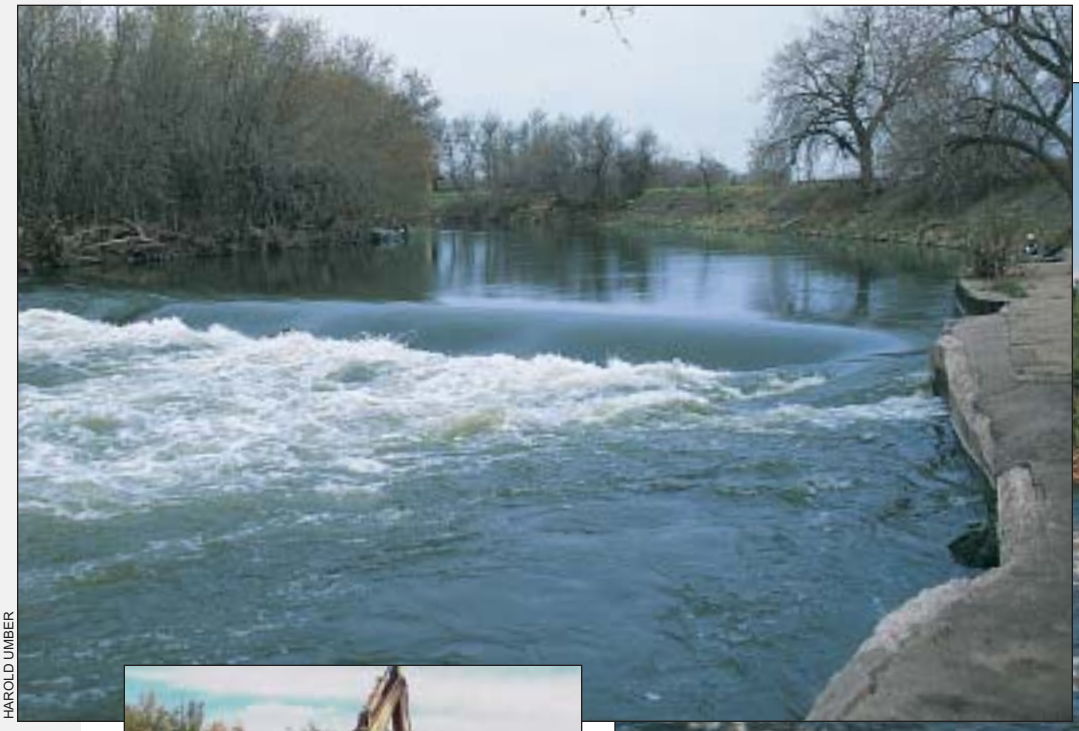
Anglers are also afforded the same luxury. "There was this guy fly-fishing at Midtown Dam in downtown Fargo for goldeye," said Terry Steinwand, Game and Fish Department fisheries chief. "When he was done, he took off his coveralls and had a three-piece suit and tie on underneath."

## Improved Fishing

Schlueter fishes the length of the Red River with abandon, mostly for channel catfish, and vouches for the return the modified dams have provided. "I think the fishing has gotten better, and not just at the sites where the dams have been modified, but throughout the river," he said. "Now we have a huge section of river that is one piece, a reconnected piece of water that allows fish to move upstream to feeding or spawning areas and tributaries of the Red."

Even so: "We have reconnected most of the river, but we have three barriers in the U.S. portion of the river that must still be addressed," Schlueter said. "Once the solutions are in place, it will be interesting to see the fun we can have on the river."

Construction workers at the Riverside Dam in Grand Forks, Schlueter said, saw firsthand how the modified dams instantly became fish-friendly. "The construction guy



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*Above: Lowhead dams make it difficult for fish to move upstream to spawning and feeding areas. Since this photo was taken, this structure at Wahpeton has been modified.*

*Inset: Heavy equipment is employed in the modification of Riverside Dam on the Red River in Grand Forks.*

*Right: The modification of Fargo's Midtown Dam has made it a safer place to recreate. Gone are treacherous undertows that took several lives over the years.*

in Grand Forks watched as fish swam by as he was working," he said. "It's not just fisheries biologists speculating that this is a good thing for fish. We've seen the benefits already."

The type of habitat available will determine the type of fish that inhabit it and their numbers. When there were eight lowhead dams on the Red, the river wasn't much of a flowing system, but rather a large pool, which benefits undesirable species such as carp. But as the system now runs more unchecked, species anglers find more desirable, such as walleye, will likely benefit. "Once we reconnect the river, we open up new areas and create new thresholds," Schlueter said.

Dams on the Red for years blocked the routes of sexually mature lake sturgeon traveling to spawning grounds. By the mid-1900s, scientists say, sturgeon were simply a footnote in the river's history. Today, these ancient fish are again able to reach spawning habitat in the Red River and its tributaries, hopefully aiding in the restoration of a species that has been around for millions of years.

"One of the most exciting things that we have done was last year when we participated in a sturgeon release on the Otter Tail River," Backman said. "To me, that symbolized change on the Red River. We are now headed in the direction where we'll have a river that is close to what it was prior to European settlement."

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*RON WILSON is editor of North Dakota OUTDOORS.*

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